GERASIMOV, I.P.; ROZOV, N.N.

Scientific activities of Evgeniia Nikolaevna Ivanova, 1890.
Pochvovedenie no. 7:105-109 Jl '65 (MIRA 19:1)

ROZOV, N.N.; FRIDLAND, V.M.

Problems of soil science in the works of Academician I.P. Gerasimov; on the occasion of his 60th birthday; 1905 - . Pochvovedenie no. 12: 28-33 D '65 (MIRA 19:1)

VINOGRADOVA, T.A., otv. red.; ROZOV, N.N., red.; MARSHAK, A.L., red.

[Reports at a scientific conference on the problems of microbiology] Doklady nauchnoi konferentsii po voprosam mikrobiologii. Vologda, 1964. 59 p. (MIRA 17:12)

1. Molochnoye (Vologodskaya oblast'). Vologodskiy molochnyy institut.

ROZOV, N.N.

Comparison of the U.S.S.R. soil classification with the new American system. Pochvovedenie no.6:42 Je'64 (MIRA 17:7)

SHKONDE, E.I., kand. sel'khoz. nauk; ROZOV, N.N.; SOKOLOV, A.V., doktor sel'khoz. nauk, otv. red.; SERDOBOL'SKIY, I.P., red. [deceased]; ZAVARITSKIY, V.N., red.; MUZYCHKIN, Ye.T., red.; FEDOROVSKIY, D.V., red.; BOLOTINA, N.I., red.; ALEKSEYEVA, D.M., red.; ANDREYEVA, Ye.A., red.

[Agrochemical characteristics of the soils of the U.S.S.R.; regions of the Northern Caucasus] Agrokhimicheskaia kharakteristika pochv SSSR; raiony Severnogo Kavkaza. Moskva, Izd-vo "Nauka," 1964. 364 p. (MIRA 17:6)

1. Akademiya nauk SSSR. Pochvennyy institut im. V.V.Dokuchayeva.

GERASIMOV, I. P.; ROZOV, N. N., Moscow

"A system of world soils."

report scheduled to be presented at the 20th Intl Geographical Cong, 6 Jul-11 Aug 64, London.

ROZOV, N.N., kand.sel'skokhoz.nauk

Sixtieth birthday of Professor A.S.Emel'ianov. Zhivotnovodstvo 24 no.5:94 My '62. (MIRA 16:10)

ROZOV, N.N.; RUBILIN, Ye.V.; RUDNEVA, Ye.N.

General characteristics of the soils of the North American Continent; from materials of the Seventh International Congress of Soil Scientists. Pochvovedenie no.12:96-109 D '61. (MIRA 16:8)

1. Pochvennyy institut im. V.V.Dokuchayeva.
(North America--Soils)

[illegible]

14-57-6-13011

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6, p 169 (USSR)

AUTHOR: Rozov, N. S.

TITLE: The Earliest Inhabitants of Western Siberia and Their Origins (K voprosu o drevneyshem naselenii Zapadnoy Sibiri i yego proiskhozhdenii)

PERIODICAL: Tr. Tomskogo obl. krayevedchesk. muzeya, 1956, Vol 5, pp 346-350

ABSTRACT: Bibliographic entry

Card 1/1

ROZOV, Nikolay Vasil'yevich; GOLUBCHIK, R.M., red.

[Cold drawing of steel pipe] Kholodnoe volochenie stal'nykh trub. Izd.2., perer. Moskva, Metallurgiia, 1965. 178 p. (MIRA 18:7)

LEBEDEVA, O., inzh.; ROZOV, R., inzh.; TYULENEV, V., inzh.

High structure for a seismic district. Prom. stroi. i inzh. soor. 4 no.3:43-44 My-Je '62. (MIRA 15:7)

(Barauni, India—Petroleum coke)
(Earthquakes and building) (Building, Iron and steel)

(A) L 8582-66

ACC NR: AP5021517 SOURCE CODE: UR/0113/65/000/008/0020/0022

AUTHOR: Rozov, R. A.; Panfilov, V. M.; Bikulich, V. A.; Yurin, I. L.; Konyashov, V. V.; Mel'nikov, A. A. (Candidate of technical sciences)

26

ORG: Bryansk Automobile Factory (Bryanskiy Avtozavod); Gorkiy Polytechnic Institute (Gor'kovskiy politekhnicheskiy institut)

B

TITLE: Hydropneumatic suspension for high-power automobiles

17

SOURCE: Avtomobil'naya promyshlennost', no. 8, 1965, 20-22

TOPIC TAGS: motor vehicle, vehicle engineering, vehicle component, pneumatic device

ABSTRACT: The Bryansk Automobile Plant (Bryanskiy avtozavod) developed jointly with the Gor'kiy Polytechnic Institute (Gor'kovskiy politekhnicheskiy institut) a hydropneumatic suspension for high-power 8 x 8 automobiles with a gross weight exceeding 10 t. The suspension is independent, has an automatic body control (three positions), and a variable clearance. The design of the front end suspension is shown as Fig. 1. The article gives a detailed description of the system, including the design of the hydropneumatic spring, its operating parameters, the suspension characteristic, and the shock-absorber characteristic. Orig. art. has: 6 figures and 1 table.

Card 1/2 UDC: 629.11.012.8

L 8582-66

ACC NR: AP5021517

0

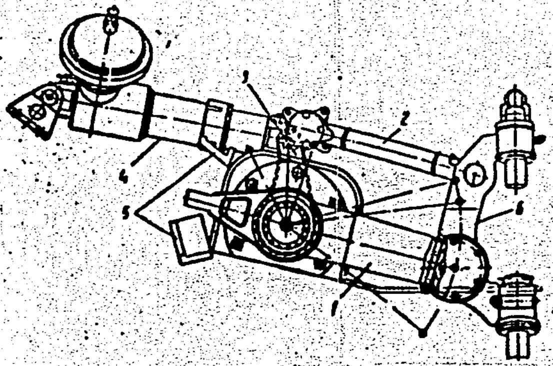


Fig. 1. Front end automobile suspension (side view). 1 - balance rod; 2 - reaction bar (both in the longitudinal plane); 3 - crank; 4 - hydrospring; 5 - limiters; 6 - wheel-holding bearing.

SUB CODE: 13 / SUBM DATE: none / ORIG REF: 001

X

jw

Card 2/2

ROZOV, R.A.; PANFILOV, V.M.; BERULICH, V.A.; ZURIN, I.L.; MEL'NIKOV, A.A.,
kand. tekhn. nauk; KONYASHOV, V.V.

Hydrodynamic suspension of a motor vehicle with high roadability.
Avt. prom. 31 no.8:20-22 Ag '65. (MIRA 18:8)

1. Bryanskiy avtomobil'nyy zavod i Gor'kovskiy politekhnicheskiy institut.

ROZOV, R.I., inzh.(Dnepropetrovsk)

Additional possibilities for economizing materials. Prom. stroi. 8 no.7:63-64 '60. (MIRA 13:7)
(Cranes, derricks, etc.)

ROZOV, S. A.

Bee Culture

"Sainfoin--one of the best nectar plants in grassland crop rotation". Pchelovodstvo, 29, No. 4. 1952

9. Monthly List of Russian Accessions, Library of Congress, August 1952 Uncl.

1. S. A. ROZOV
2. USSR (600)
4. Bee Culture
7. Maintaining sturdy colonies in horizontal hives. Pchelovodstvo 29 no. 12. 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

ROZOV, S. A.

587 KORABLEV, I. I., BABICH, I. A. i ROZOV, S. A. Pchelovodstvo. kiev. gossel'khozizdat USSR. 1954. 576 s. s ill. 21 sm. 100.000 ekz. 11r. 6 k._V per.- Na pereplete avt. ne ykazany.-
/54-54605/ p (638.1)

So: Knizhnaya Letopis, Vol. 1, 1955

Q

USSR/Farm Animals - Honeybee

[redacted]bs Jour : Ref Zhur - Biol., No 15, 1958, 69440

Author : Rozov, S.A.

Inst : Ukrainian Experiment Station of Apiculture

Title : Nectoriferousness of Esparcet (Onobrychis)

Orig Pub : Sb. nauchn. tr. Ukr. opytn. st. pchelovodstva, 1957, vyp. 1, 53-64

Abstract : Characteristics of different varieties of esparcet are given. The transportation of apiaries to areas occupied by esparcet crops left for seed increased the seed yield up to five centners/ha. In various years, under different conditions, honeybees collected from 1 ha. of esparcet crop 37 to 155.5 kg, an average of 75 to 80 kg of honey. The esparcet blossoms after the florescence of the gardens has ended and before the beginning of the

Card 1/2

Card 2/2

ROZOV, S.A.

Q-5

USSR/Farm Animals - Honey Bee.

Abs Jour : Ref Zhur - Biol., No 7, 1958, 31019

Author : Rozov S.A.

Inst : -

Title : Apiculture in the First Years of Soviet Rule. (Pchelovodstvo v pervyye gody sovetskoy vlasti).

Orig Pub : Pchelovodstvo, 1957, No 8, 15-20

Abstract : The first stage of the development of apiculture (before the establishment of the kolkhozes and sovkhozes) was characterized by a very rapid growth of the number of bee colonies, and by a thorough reorganization of beekeeping on the basis of a better technique. The number of the frame hives in 1900 constituted 13%; in 1910 - 17%; in 1920 - 35.5%; and in 1926 - 54.9%; at the end of the second dacade of Soviet rule, only frame hives were used in beekeeping.

Card 1/1

NUZHDIN, Aleksandr Sergeyevich; ROZOV, Sergey Alekseyevich; ZAVARSKIY, A.I., red.; PROKOF'YEVA, L.N., tekhn. red.

[Principles of beekeeping] Osnovy pchelovodstva. Moskva, Gos. izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1961. 215 p. (MIRA 14:10)

(Bee culture)

Country : USSR
Category : Farm Animals. The Honeybee. Q-5

Abs. Jour : RZBiol., No. 4, 1959, No. 16757

Author : Rozov, S. A.
Institut. : -
Title : Taking Measures for the Protection of Local Bees.

Orig Pub. : Pchelovodstvo, 1958, No 7, 21-22

Abstract : At Bashkir the number of apiaries in which the purebred species of Middle-Russian bees is found, declines sharply; thus, in 1927 there were 908 apiaries, in 1928, 441, and in 1929, 376. In order to preserve the bees it is proposed to organize a reservation and registered apiaries in Bashkir into which it would be forbidden to import bees from other localities.

Card: 1/1

GLUSHKOV, Nikolay Mikhaylovich; ROZOV, Sergey Alekseyevich; ULIN, I.I., red.; KHOLIN, G.Ye., red.; SAYTANIDI, L.D., tekhn. red.

[Advice to the beekeeper]Sovety pchelovodu. Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1961. 150 p. (MIRA 15:11)
(Bee culture)

L 10067-67 EWT(m)/EWP(w) IJP(c) WW/EM

ACC NR: AP6029978 SOURCE CODE: UR/0413/66/000/015/0192/0192

32

INVENTORS: Drobyshevskiy, E. M.; Rozov, S. I.

ORG: none

TITLE: Method for active damping of vibrations in patterns. Class 42, No. 183976

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 192

TOPIC TAGS: vibration simulation, vibration transmission, vibration damping, vibration, mechanical vibration

ABSTRACT: This Author Certificate presents a method for active damping of vibrations set up in models immersed in a stream of liquid or gas. The method is based on subjecting a model to a force proportional to and of opposite phase to the force of vibrations. To avoid the use of a counterweight as the damping force transducer, the damping force is transmitted to the specimen by periodically changing the aerodynamic parameters of the fluid flow, viz., rate of flow and density of fluid.

SUB CODE: 13, 20/ SUBM DATE: 25Jun63

UDC: 620.178

Card 1/1

L 02282-67 EWT(1) IJP(c) AT

ACC NR: AP6025242 SOURCE CODE: UR/0057/66/036/007/1186/1197

AUTHOR: Drobyshevskiy, E.M.; Rozov, S.I.

14
12
B

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Investigation of the current density distribution in the homopolar device

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 7, 1186-1197

TOPIC TAGS: plasma magnetic field, electric field, plasma conductivity, hydrogen plasma, air nonhomogeneous magnetic field

ABSTRACT: The authors have investigated the effect of deviations of the magnetic field from uniformity on the distribution of current at the outer electrode of the homopolar device. The device consists of two coaxial cylindrical electrodes closed at the ends by plane dielectric walls, mounted in an axial magnetic field, and containing plasma 21 in the space bounded by the electrodes and the dielectric end walls. The homopolar device employed in the present experiments was 3.6 cm long with a 9.8 cm radius outer electrode and a 3.4 or 6.75 cm radius inner electrode; it was filled with air or hydrogen at from 0.25 to 1.0 mm Hg and was mounted in a 2.5 kOe field. Seven aluminum foil probes were mounted with 0.5 mm gaps between them approximately 1 mm above the inner surface of the outer electrode in order to measure the axial distribution of the current. While the current to one probe was being measured the other

Card 1/2 UDC: 533.9

L 02282-67

ACC NR: AP6025242

2

probes were grounded to the electrode. The uniformity of the magnetic field was disturbed in an axially symmetric manner by altering the shapes of the pole pieces. In general the current distribution was rather sharply peaked when the inner electrode was negative and rather flat when the inner electrode was positive. Deviations of the magnetic field from uniformity considerably affected the current distribution, and with both polarities the magnetic field configuration near the anode was more significant than that near the cathode. Many current distribution curves are presented and are discussed at some length, largely in terms of the focusing effects discussed in an accompanying theoretical paper by E.M.Drobyshevskiy (ZhTF, 36, 1175, 1966/see Abstract AP6025241/). Under some conditions current distributions with three maxima were obtained. These are explained in terms of the focusing and defocusing effects with the aid of calculations similar to those in the paper cited above, but for a more complex field configuration. The calculations are relegated to an appendix. There is also an appendix on ion diffusion in the homopolar device. Ion diffusion was not significant in most of the present experiments. The authors thank Professor Yu.A.Dunayev and Candidate E.V.Donskiy for their interest and for valuable discussions. Orig. art. has: 11 formulas, 8 figures and 1 table.

SUB CODE: 20 SUBM DATE: 10Mar65 ORIG. REF: 005 OTH REF: 001

Card 2/2 vmb

L 45981-66 EWT(1)/EWT(m)/T DS

ACC NR: AP6028627 SOURCE CODE: UR/0057/66/036/008/1501/1506

79
B

AUTHOR: Donskoy, K.V.; Drobyshevskiy, E.M.; Rozov, S.I.

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Measurement of the electric field strength in the homopolar device

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 8, 1966, 1501-1506

TOPIC TAGS: gas discharge plasma, magnetic field, electric field, air, hydrogen, argon

ABSTRACT: The authors have measured the electric field strength in a homopolar device consisting of two 7.2 cm long, 6.8 and 19.6 cm diameter coaxial cylindrical electrodes mounted in the 7.8 cm gap between 29.5 cm diameter pole pieces with 5.2 cm diameter openings. The axial magnetic field (up to 2.5 kOe) was uniform within 2% throughout the working volume. The device contained air, hydrogen, or argon at pressures from 0.125 to 1.0 mm Hg. The electric field strengths were measured with a double probe consisting of two 0.2 mm diameter 3-4 mm long platinum wires mounted 4-6 mm apart. The electric field strength was not at all inversely proportional to the distance from the axis, as it would be if the resistivity of the medium were constant, but tended to increase toward the anode. As a rough approximation, especially in the case of negative polarity, the electric field could be regarded as constant within the volume of the device, and equal to its value at the mean radius. Except in hydrogen at high

Card 1/2 UDC: 537.525.1

L 45981-66

ACC NR: AP6028627

O

magnetic field strengths, the electric field strength was proportional to the magnetic field strength. The electrode potential drops were determined by measuring the potential difference between the electrode concerned and one of the probe wires, positioned 3 mm from it. Both the anode and cathode drops increased with increasing magnetic field strength, but the authors are unable to draw any definite conclusions concerning the effect of the magnetic field on the thickness of the region in which the electrode drops take place. Randomly appearing cathode spots were nearly always visible. In hydrogen the cathode drop increased more rapidly with increasing magnetic field strength in magnetic fields stronger than 1 kOe than in weaker fields. This behavior is tentatively ascribed to disruption of the oxide film on the electrode by higher energy hydrogen ions, which facilitates field emission of electrons. Orig. art. has: 3 figures.

SUB CODE: 20 SUBM DATE: 24Jun66 ORIG. REF: 007 OTH REF: 004

LS

Card 2/2

L 39313-65 EWT(d)/EWT(1)/EWP(m)/EWT(m)/EWP(w)/EWA(d)/EPR/FCS(k)/EWA(h)/EWA(c)
Pd-1/Pi-4 WW/EM
ACCESSION NR: AP5009550 S/0207/65/000/001/0098/0102

AUTHOR: Maslennikov, V. G. (Leningrad); Pariyskiy, I. G. (Leningrad); Rozov, S. I. (Leningrad); Studenkov, A. M. (Leningrad)

45
B

TITLE: Experimental study of the location of a detached shock wave in real gases

SOURCE: Prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 1, 1965, 98-102

TOPIC TAGS: supersonic flow, shock wave, stand off distance, detached shock wave, ballistic shock tube, real gas, vibrational excitation, thermodynamic equilibrium

ABSTRACT: A method is described for measuring the stand-off distance of a bow shock wave from a blunt body in free flight, and the effect of excitation of vibrational degrees of freedom on the location of the detached shock wave in air and in carbon dioxide is investigated by means of a ballistic shock tube. It is stated that this method is free from all errors due to refraction of light in the gas shock

Card 1/~~4~~2

L 39313-65
ACCESSION NR: AP5009550

0

layer. A schematic diagram of the setup (see Fig. 1 of the Enclosure) and a description of the experimental procedure are given. Oscillographs of the flow over bodies of various hemispherical shapes and at various velocities from 500 to 2000 m/sec are presented. Theoretical data, with $\gamma = 1.4$, are compared with the results of experimental measurements of the stand-off distance in air from a hemispherical model 15 mm in diameter, at initial pressures of 100 mm Hg and 1 atm, at velocities of M = 1 to 7, and in carbon dioxide from a hemispherical model 57 mm in diameter at velocities of M = 2 to 4. An analysis of the results shows that a variation in the initial pressure, at given M, leads to a substantial variation of the stand-off distance and that for all values of the initial pressure, the variation in the stand-off distance with increased M, shows a tendency for establishment of thermodynamic equilibrium in the shock layer. The flow regimes which correspond to a total "freezing" equilibrium and nonequilibrium excitation of vibrations were investigated. Orig. art. has: 7 figures. [AB]

Card 2/4

ROZOV, S.N.

A spatula-mirror for posterior rhinoscopy. Vest.otorin. 21 no.5: 88-89 S-O '59. (MIRA 13:1)

1. Iz otolaringologicheskogo otdeleniya 9-y gorodskoy bol'nitsy Novosibirska.
(OTORHINOLARYNGOLOGY, equipment and supplies)

L 26785-66 EWP(j)/EWT(l)/EWT(m)/ETC(m)-6/T IJP(c) RM/WW/DJ

ACC NR: AP6017452 SOURCE CODE: UR/0237/66/000/002/0021/0024

AUTHOR: Ivanov, A. V.; Rozov, S. P.; Firsov, N. T.

50
47
B

ORG: none

TITLE: Vacuum x-ray spectrometer for the 1.5-45 mμ spectral region

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 2, 1966, 21-24

TOPIC TAGS: spectrometer, emission spectrum, absorption spectrum/SP-114 spectrometer

ABSTRACT: The authors describe the SP-114 spectrometer for analyzing emission and absorption spectra in the 1.5-45 mμ x-ray region. The device uses the principle of glancing beam incidence on a stationary concave diffraction grading with Rowland circle spectral focusing. A schematic diagram and cutaway view of the instrument are shown. The instrument has spectral working ranges of 1.5-4.5 mμ and 4.5-45 mμ which are selected by changing the diffraction grating and master tamplate. The grating for the shortwave range has a radius of curvature of 6 m, while that for the longwave range has a radium of curvature of 2 m. The width of the input and output slits for the spectrometer may be varied from 0 to 0.4 mm without destroying the vacuum in the instrument. Provision is made for controlling the height of both slits. The condenser mirrors may be adjusted without destroying the vacuum. All the vacuum seals in the instrument are made from metal and teflon so that the device may be

2

Card 1/2 UDC: 535.853.3-3

L 26785-66

ACC NR: AP6017452

3

heated for degassing. The regulated power supply may be controlled from 0 to 10 kv and plate current is adjustable from 20 μa to 200 ma. An oil-vapor pump is used for evacuating the spectrometer tube to a pressure of $1\cdot10^{-5}$ mm Hg, while a second oil-vapor pump evacuates the x-ray tube to a pressure of $1\cdot10^{-6}$ mm Hg. The instrument measures 140x130x140 cm overall. Instrumental errors are analyzed. The authors are grateful to A. I. Yefremov for a number of comments and assistance in developing the instrument and to Academician A. A. Lebedev for directing the work. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 20 / SUBM DATE: 15Apr65 / ORIG REF: 007 / OTH REF: 001

Card 2/2 cc

ROZOV, S.S., inzh.

New principle for the construction of a resistance relay with an eliptical characteristic. Energ. i elektrotekh. prom. no.1:35-38 Ja-Mr '65.
(MIRA 18:5)

ROZOV, S.S., inzh.

Contactless tripping of switches. Energ. i elektrotekh. prom. no.1:19-23 Ja-Mr'64. (MIRA 17:5)

ROZOV, S.S.

Complex distance-type protection devices for electric power transmission lines. Energ. i elektrotekh. prom. no.2:75-78 Ap-Je '63. (MIRA 16:7)

1. Institut avtomatiki Gosplana UkrSSR.
(Electric protection)
(Electric power distribution)

L 17878-63 EWT(d)/BDS AFFTC/ASD/RADC

ACCESSION NR: AP3004271 S/0106/63/000/007/0016/0020

52

AUTHOR: Rozov, V. M.

8

TITLE: Optimum speed of telegraph transmission with phase-shift keying

SOURCE: Elektrosvyaz', no. 7, 1963, 16-20

TOPIC TAGS: phase-shift keying, telegraph transmission

ABSTRACT: A theoretical analysis is offered of the factors, such as signal-to-noise ratio, self-correlation factor, and malfunction probability, which determine the optimum speed of keying. The optimum keying-speed values are found, for single and double phase-shift-keying reception, that correspond to minimum probability of error. It is claimed that with phase-shift keying, the speed of telegraph transmission can be increased by 20-30% without reducing the degree of noise immunity. Orig. art. has: 2 figures, 12 formulas and 1 table.

Card 1/2 1

ROZOV, S.S., inzh.

Remotely controlled protection of a.c. overhead contact systems.
Elek. i tepl.tiaga no.8:46-47 Ag '63. (MIRA 16:9)
(Electric lines—Overhead) (Electric protection) (Remote control)

ROZOV, S.S., inzh.

Directional resistance relay with phase comparison. Energ. i elektrotekh. prom. no.4:20-23 O-D '65. (MIRA 19:1)

L 18276-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3006003 S/0250/63/007/007/0446/0448 60

AUTHOR: Sirota, N. N.; Rozov, V. V.

57

TITLE: Identity period in the crystal lattice and microhardness of indium phosphide-gallium phosphide solid solutions

SOURCE: AN BSSR. Doklady*, v. 7, no. 7, 1963, 446-448

TOPIC TAGS: A(III)B(V), A(III)B(V) compound, semiconductor, indium phosphide, gallium phosphide, indium phosphide gallium phosphide system, pseudobinary system, solid solution, indium gallium alloy, phosphorus, synthesis, zone leveling, traveling hot zone, microhardness, identity period, lattice constant, Vegard law

ABSTRACT: Because literature data are contradictory, the pseudobinary InP-GaP semiconductor system has been studied to ascertain whether solid solutions exist in the system. Samples of InP-GaP covering the entire composition range were synthesized in a two-zone furnace with simultaneous zone leveling by diffusion of molten In-Ga alloys from a phosphorus source in an evacuated quartz ampoule. A phosphorus pressure of 5—7 atm was maintained inside the ampoule by setting

Card 1/3

L 18276-63

ACCESSION NR: AP3006003

3

the temperature of the cool zone, that containing P, at 430C. The temperature in the traveling hot zone varied from 1100 to 1280C depending on composition. Unreacted metal was removed in warm HCl. The microhardness of the crystals thus obtained was measured with a PMT-3 apparatus, and the lattice constant was determined from x-ray powder patterns in a URS-50I ionization chamber with Cu K_{α}-radiation. The results of both measurements are given in Fig. 1 of the Enclosure. The data of Fig. 1 and of micrographic analysis disclosed the existence, in the high-temperature region at least, of a continuous series of InP-GaP solid solutions with an almost linear relationship between lattice constant and composition, in accordance with the Vegard law. Orig. art. has: 1 figure.

ASSOCIATION: Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR (Department of Solid State and Semiconductor Physics, AN BSSR)

SUBMITTED: 21Feb63 DATE ACQ: 06Sep63 ENCL: 01

SUB CODE: PH, MA NO REF SOV: 002 OTHER: 002

Card 2/3

ROZOV, S. V., Engr. Cand. Tech. Sci.

Dissertation: "On Visible Silhouettes of Surfaces." Moscow Order of the Labor Red Banner Construction Engineering Inst imeni V. V. Kuybyshev, 3 Feb 47.

SC: Vechernyaya Moskva, Feb, 1947 (Project #17836)

ROZOV, S. V.

N/5
661
.R8

Sbornik zadaniy po chercheniyu (Collection Of Problems In Mechanical Drawing) Kiyev, Mashgiz, 1954.

268 p. diagrs., tables.

"Literatura": p. (370)

ROZOV, S.V., kandidat tekhnicheskikh nauk, dotsent. SERDYUK, V.K., inzhener, redaktor; RUDENSKIY, Ya.V., tekhnicheskiy redaktor

[Collection of problems in mechanical drawing] Sbornik zadanii po chercheniiu. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, Ukrainskoe otdelenie, 1954. 268 p. (MLRA 7:10)
(Mechanical drawing)

ROZOV, S.V., kandidat tekhnicheskikh nauk, dotsent; GODIK, Ye., dotsent, otvetstvenny redaktor; SERDYUK, V.K., inzhener, vedushchiy redaktor; RUDENSKIY, Ya.V., tekhnicheskiy redaktor.

[Course in mechanical drawing] Kurs chercheniia. Izd. 2-e, perer. i dop. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroitel'-noi i sudostroit. lit-ry, 1954. 299 p. (MLRA 7:12)
(Mechanical drawing)

ROZOV, S.V., kand. tekhn. nauk.

Collected standards "Drawings in building" are needed.
Standartizatsiia 23 no.2:51-52 F '59. (MIRA 12:1)
(Building--Details--Drawing)

ROZOV, S.V., prof.; RYZHENKO, I.M., kand. tekhn. nauk, retsenzent; GUROV, K.A., inzh., retsenzent; VYAZOVOY, M.I., inzh., retsenzent; KOZLOV, A.P., red.-izd-va; GORDEYEVA, L.P., tekhn. red.

[Course in mechanical drawing] Kurs chercheniia. izd.ispr. Moskva, Mashgiz, 1963. 319 p. (MIRA 17:1)

RASSOKHIN, Valer'yan Vasil'yevich, kand. tekhn. nauk; ROZOV, Serafim Vasil'yevich; TSELINSKIY, Nikolay Aleksandrovich; IVANOV, N.N., prof., retsenzent; TYUFTIN, Ye.P., inzh., red.; SOMOVA, T.M., inzh., red.; DUGINA, N.A., tekhn.red.

[Interesting problems in projection drawing] Zanimatel'nye zadachi po proektsionnomu chercheniiu. Moskva, Mashgiz. 1962. 167 p. (MIRA 16:6)

(Projection)

ROZOV, Serafim Vasil'yevich, dotsent, kand.tekhn.nauk; SERDYUK, V.K.,
inzh., red.

[Exercises in mechanical drawing] Sbornik zadanii po chercheniiu.
Izd.3., dop. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.
lit-ry, 1960. 298 p. (MIRA 13:12)
(Mechanical drawing)

ROZOV, Serafim Vasil'yevich, prof.; SOLODUN, G.A., red.

[Course in mechanical drawing] Kurs tekhnicheskogo chercheniia. Kiev, Gossel'khozizdat USSR, 1963. 182 p. (MIRA 17:3)

ROZOV, Serafim Vasil'yevich, dotsent, kand.tekhn.nauk; VASSERMAN, Ya.Ye., inzh., retsenzent; KISLOV, I.A., inzh., retsenzent; LOPATA, A.Ya., kand.tekhn.nauk, red.; SERDYUK, V.K., red.

[Teaching mechanical drawing in technical schools; a brief manual for teachers] Prepodavanie chercheniia v tekhnikumakh; kratkoe rukovodstvo dlia prepodavatelei. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 245 p. (MIRA 13:1)
(Mechanical drawing--Study and teaching)

SOV/28-59-2-17/26

25(5)

AUTHOR: Rozov, S.V., Candidate of Technical Sciences

TITLE: The Need for a Compilation of "Drawings in the Building Industries" (Neobkhodim sbornik standartov "Chertezhi v stroitel'stve")

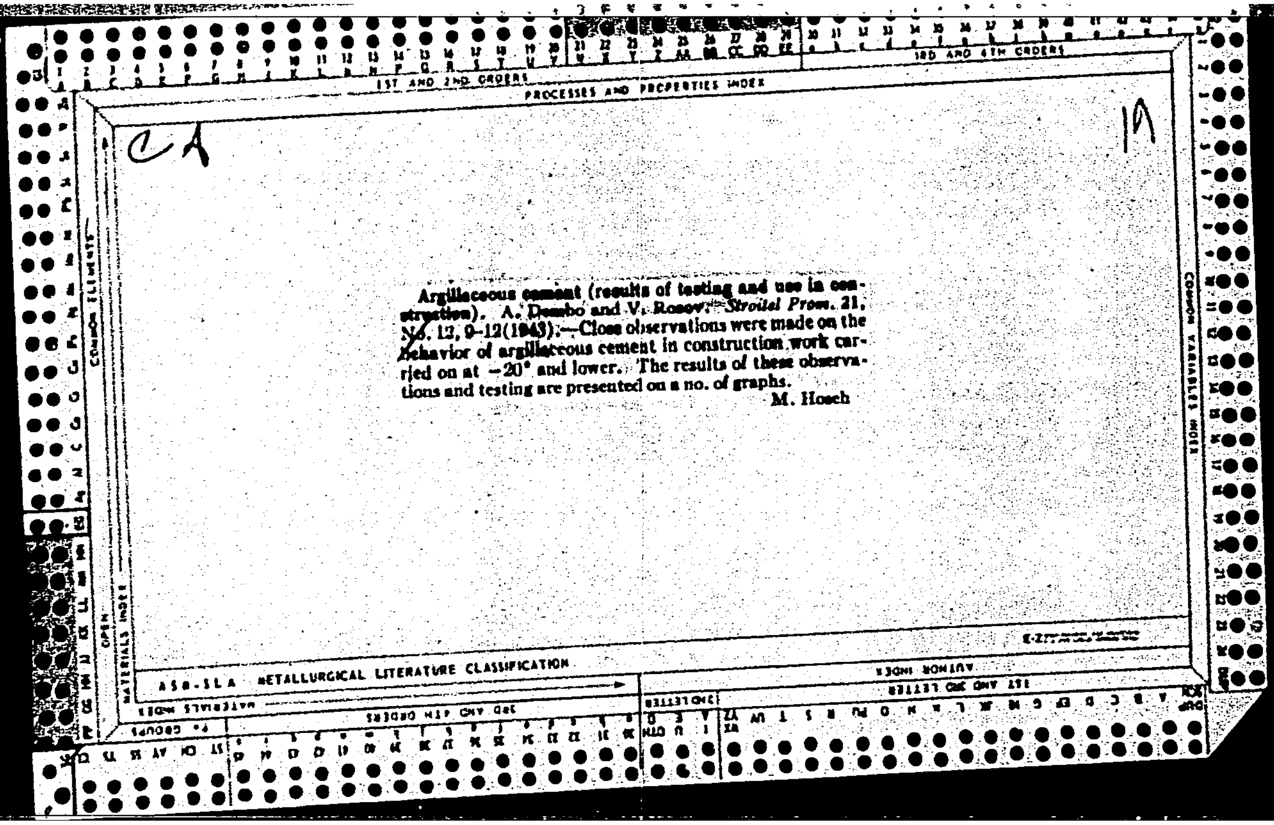
PERIODICAL: Standartizatsiya, 1959, Nr 2, pp 51 - 52 (USSR)

ABSTRACT: The lack of GOSTs for drawings in the building industries causes unnecessary variations when different concerns prepare drawings. In schools, text books also treat this problem in different ways. The author recommends new standards be established as was done for "drawings in machine building".

Card 1/1

ROZOV, Serafim Vasil'yevich, dotsent, kand.tekhn.nauk; MAYEVSKIY, V.V., inzh., red.; RUDENSKIY, Ya.V., tekhn.red.

[Course in drawing] Kurs chercheniia. Izd.6, dop. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1959. 339 p. (MIRA 12:1)
(Mechanical drawing)



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

19

Argillaceous cement (results of testing and use in construction). A. Dembo and V. Rosov. *Stroitel Prom.* 21, No. 12, 9-12(1943).—Close observations were made on the behavior of argillaceous cement in construction work carried on at −20° and lower. The results of these observations and testing are presented on a no. of graphs.

M. Hosch

COMMON ELEMENTS

COMMON VARIABLES INDEX

MATERIALS INDEX

OPEN

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

AUTHOR INDEX

1ST AND 2ND LETTER

3RD AND 4TH ORDERS

ROZOV, V.

Output stages of transistor radio receivers. Radio no.9:49-51 S '63. (MIRA 16:12)

ROZOV, V.

Low frequency transistor amplifiers with low current gain. (MIRA 17:9)
Radio no.4:39-41 Ap '64.

ROZOV, V., inzh.

Device for varying the capacitance of fixed condensers. Radio no.12: 48-50 D '62. (MIRA 16:3)

(Condensers (Electricity))

ROZOV, V.

Activists of the "Selikhovo" State Farm set an example. Okhr. truda i sots.strakh. 5 no.4:14-15 Ap '62. (MIRA 15:4)

1. Tekhnicheskiy inspektor Kalininskogo oblsovprofa.
(Kalinin Province—Agriculture—Safety measures)

ROZOV, V. (Kalininskaya oblast')

Practice originating from work. Okhr. truda i sots. strakh. 4
no. 2:22-24 F '61. (MIRA 14:2)
(Kalinin Province--Farm mechanization--Safety measures)

ROZOV, V.A.

"Oblast Conference of Hygienists, Epidemiologists, Microbiologists and Infectionists held at Kurgan," Gig. i San., No. 12, 1949.

ROZOV, V. I. (DECEASED) 1963/3

c' 1961

TRAUMATOLOGY AND
ORTHOPEDICS

SEE ILC

ROZOV, V. I.: GUDALIN, G. G.

Geography and Geology

Requirements of industry as to the quality of mineral raw materials. Handbook for geologists-- Moskva, Gos. izd-vo geologicheskoi lit-ry Komiteta po delam geologii pri SNK SSSR, No. 27, Molybdenum, 1947.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED

SHTEYN, Boris Ben'yaminovich; CHERNYAK, Nina Abramovna; ROZOV, V.M., kand.tekhn.nauk, otv.red.; VENGRENYUK, L.I., red.; KARABILOVA, S.F., tekhn.red.

[Single-band modulation with the aid of phase circuits] Odnopolosnaia moduliatsiia s pomoshch'iu fazovykh skhem. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1959. 163 p. (MIRA 12:11)

(Modulation (Electronics))

AUTHOR: Rozov, V.M. SOV/106-59-7-5/16

TITLE: Exact Frequency Apparatus

PERIODICAL: Elektrosvyaz', 1959, Nr 7, pp 33 - 39 (USSR)

ABSTRACT: After brief reference to his previous work (Ref 1) on the necessity of high-stability, reference oscillators in modern communication and broadcast systems, the author considers a number of factors appertaining to exact frequency apparatus.

1) Frequency bands. The exact frequency apparatus should give exact spot output frequencies in the 2 to 32 Mc/s band and in the 50 to 7 000 c.p.s. band. In some cases, it will be necessary to obtain a number of frequencies close to 100 kc/s. For communication systems using tropospheric scatter, ionospheric scatter or meteorite trails, the 70-100 Mc/s band will also be required.

2) Reference oscillator frequency. The reference frequency oscillator should be an independent unit and should guarantee that the frequency instability will be less than (1 - 2) x 10^{-8}. Present-day Soviet reference oscillators

Card1/4

giving relatively low frequency oscillations (90, 100 kc/s) have instabilities less than 4×10^{-8}. To obtain frequencies of the order of 30 Mc/s frequency multipliers with multiplication factors of 300-600 are necessary. A better solution would be the development of a reference oscillator giving a frequency of the order of 1-5 Mc/s with the above stated stability.

3) The frequency increment of the frequency "grid". The steps in the values of the output frequencies are determined by the customers' requirements but the minimum difference between the output frequencies must be at least twice the value of the absolute variation in the frequency and should be more than 5 - 10 times its value. Existing exact frequency apparatus gives steps of 1 kc/s, 100 kc/s and even 10 c.p.s. It is considered that in the 2 - 32 Mc/s range, steps of 100 c.p.s. are sufficient.

4) Direct reading of frequency. The frequency reading should be simple and given directly in decimal notation. This will also simplify remote and automatic control of apparatus.

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5) Quality of the output frequencies. The following factors are examined:

a) parasitic amplitude modulation by noise voltages and by harmonic frequencies;

b) "by-product" frequencies arising from non-ideal filters, poor design of the block diagram and asymmetry in spectrum about the required frequency;

c) parasitic frequency modulation.

The author now considers the requirements for, and construction of, grouped exact-frequency apparatus. The object is to ensure the stability of transmitters and receivers, which are concentrated together in radio centres, by using a common reference oscillator and separate combination panels for supplying up to as many as 30 different units of the radio centre.

Finally, methods of measuring the parasitic amplitude modulation, the "by-product" frequencies and frequency-modulation deviation are discussed.

Exact Frequency Apparatus SOV/106-59-7-5/16

Candidate of Technical Sciences A.A. Pirogov, Engineer B.K. Solntsev, M.Z. Tseytlin, B.A. Khanov, K.N. Aref'yev and A.A. Fregatov participated in this work.
There are 6 figures and 8 references, of which 4 are Soviet, 4 English.

SUBMITTED: August 1, 1958

SOV/137-58-7-14566

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 89 (USSR)

AUTHOR: Rozov, V.N.

TITLE: Intensifying the Process of Electrolytic Nickel Refining (Intensifikatsiya protsessa elektroliticheskogo rafinirovaniya nikelya)

PERIODICAL: Materialy Soveshchaniya po vopr. intensifik. i usoversh. dobychi i tekhnol. pererabotki medno-nikelevykh i nikelevykh rud. 1956 g. Moscow, Profizdat, 1957, pp 184-195

ABSTRACT: After reconstruction, the Ni electrolytic refining department at the Severonikel' Plant was restarted in September 1945. At the end of 1949 it attained its planned output level and by 1955 exceeded it by 75% through intensification of production, simplification of a number of operations, and partial reconstruction of the equipment. Examination is made of the work of the electrolytic and refining departments and of the directions in which their productivity can be further increased. This would require partial reconstruction of individual portions of the process and substitution of more modern for obsolete equipment. N.P.

1. Nickel--Production 2. Electrolysis--Equipment

Card 1/1

ROZOV, V. M.

Radio Circuits

Discharges at the outlet of a quadratic detector.
Zhur. tekh. fiz. 22, No. 7, 1952.

9. Monthly list of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED.

ROZOV, V. M.

PA 236T92

USSR/Physics - Chance Processes Oct 52

"Statistical Properties of Rounded Probability Processes," V. M. Rozov and Ye. A. Khmel'nitskiy

"Zhur Tekh Fiz" Vol 22, No 10, pp 1618-1623

Authors consider the statistical properties of a stationary chance process representing the rounding off of several original stationary processes. Solve 2 problems from field of radio communication. Cites V. I. Bunimovich (Fluctuational Processes in Radio Receivers. Moscow 1951). Conclude that a new rounded chance process possesses least mean square deviation, but greatest mean value.

236T92

236T92

ROZOV, V. M.

"Statistical Characteristics of Radiotelegraphic Short-Wave Reception with Interference from Neighboring Telegraph Stations." (Dissertation for Degree of Candidate of Technical Sciences) Min Communications, USSR, Moscow Electrotechnical Inst of Communications, Moscow, 1955

SO: M-1036 28 Mar 56

USSR/Electronics - Radio stations

Card 1/1 Pub. 133 - 16/19

Authors : Rozov, V. M., Senior Engineer, Central Radio Division, Ministry of Communications, USSR

Title : The type of radio station recommended for intra-regional communications service

Periodical : Vest. svyazi 1, 27 -28, Jan 1955

Abstract : Intra-regional radio communication services in Middle Asia, Kazakhstan, Siberia, Far East and extreme north regions is examined, and the characteristics of suitable radio-stations, having parameters conforming to the type of services desired, are set forth. The following wavelengths were recommended: a) 40 - 120m for up to 8 hrs radio-communication service over a 150 to 400 km radius, and b) 120 - 300m waves for distances up to 150 km, during the same daily period of service. For operation in extreme northern regions, during ionospheric storms, radio waves of 2000 - 3000m are recommended. Other data pertaining to various conditions of operations are also given, such as 1) the power of the transmitter and receiver sets; 2) power supply from power lines, and various generators, 3) types of transformers and converters, 4) types of antennas, etc.

Institution: .....

Submitted: .....

Rozov, V.M.

USSR/Radiophysics - Generation and Conversion of RF Oscillations, I-4

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35273

Author: Rozov, V. M.

Institution: None

Title: Use of Ferrite Transformers in Frequency Multiplication and Division Circuits

Original Periodical: Elektrosvyaz', 1956, No 6, 19-22

Abstract: A description of several experimentally-verified circuits for frequency multiplication and division, in which toroidal transformers with ferrite cores having a rectangular hysteresis loop are used.

Card 1/1

Category : USSR/Radiophysics - Radio-wave reception I-7

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 1927

Author : Rozov, V.M.
Title : On the Effectiveness of Duplicate Reception in the Presence of Noise from Stations Operating at Nearby Frequencies.

Orig Pub : Radiotekhnika, 1956, 11, No 7, 14-25

Abstract : An estimate is made of the effectiveness of duplicate reception in the presence of noise from stations operating at nearby frequencies. The effectiveness of duplicate reception is characterized by the reduction in the average percentage of false symbols compared with the value obtained with single reception. The analysis is made for radio communication over long distances.

Card : 1/1

ROZOV, V.M.

Method of calculating the frequency separation between shortwave radiotelegraph stations. Elektrosviaz' 10 no.4:35-39 Ap '56. (MLRA 9:7)
(Telegraph, Wireless)

ROZOV, V.M., inzhener.

Remote control in provincial radio stations. Vest.sviazi 16 no.3:
5-6 Mr '56. (Remote control)(Radio stations) (MIRA 9:7)

ROZOV, V.M.

108-6-2/11

AUTHOR ROZOV V.M.
TITLE ~~On the Grou~~ping of Distortions in the Case of Shortwave-Radio
Telegraphy.
(O gruppirovanii iskazheniy pri radiotelegrafii na korotkikh vol-
nakh-Russian)

PERIODICAL Radiotekhnika, 1957, Vol 12, Nr 6, pp 15 - 24 (U.S.S.R.)

ABSTRACT Here the question as to how often the ratio between the signal and
the disturbance decreases below the boundary value and for how
long a time it remains in this position is theoretically investiga-
ted. With other words: how often, on the average, groups of di-
storted signals occur in the given coupling line per time unit and
how long the average duration of this group is. The author assumes
that the disturbance which causes the distortion is caused by a
neighbouring station. Noises and other disturbances are taken to
be so small that they can be neglected. In consequence of the
curves obtained the following can be said: 1.-The groups of di-
storted signals develop most frequently if the average value of
the ratio $\frac{\text{signal}}{\text{disturbance}} = K$ approaches the boundary values K_{Gr} i.e.
if $\alpha \approx 1 \div 2$. $\alpha = \frac{\sigma_C}{\sigma_F K_{Gr}}$ where σ_F is the mean quadratic
deflection of the field level of the interfering transmitter.
2. The increase of the field fading frequency of the station wan-
ted in comparison to the fading frequency of the field of the in-

Card 1/2

On the Grouping of Distortions in the Case of Shortwave- 108-5-2/15
Radio Telegraphy.

terfering transmitter in the case of $\alpha > 0,6$ causes an essential increase of the group number of distorted signals per time unit. 3.- A decrease of the field fading frequency of the station wanted in comparison to the field fading frequency of the interfering transmitter in the case of $\alpha > 0,6$ causes a slight decrease of the group number of distorted signals per time unit. 4.- The formulae deduced here for the average number of zero passages of the occasional function $\varphi_1(t)$ per time unit as well as that for the average duration of the group of distorted signals are also valid if the station desired is received with fading and if the disturbance is a fluctuating noise of the receiver.
(2 illustrations and 9 Slvic references).

ASSOCIATION Not Given.
PRESENTED BY
SUBMITTED 4.3.1957
AVAILABLE Library of Congress.
Card 2/2

AUTHOR: Rozov, V.M. SOV/106-59-4-4/13

TITLE: Required Frequency Stability of Reference Oscillator in Shortwave Radio Systems (O neobkhodimoy stabil'nosti chastoty opornogo generatora dlya korotkovolnovykh radiosistem)

PERIODICAL: Elektrosvyaz', 1959, Nr 4, pp 36 - 40 (USSR)

ABSTRACT: Precision-frequency techniques and apparatus are essential in the construction of new communication and remote-control systems. For shortwave and ultra-shortwave "synchronous" broadcasting, calculations and experiments have shown that the frequency instability should not be worse than 1×10^{-8} and for shortwave single-sideband radio-telephony, not using a pilot signal nor auto-trimming of the receiver, the frequency difference between the transmitter and receiver carrier oscillations should not be greater than 2 c.p.s., i.e. for a wavelength of 15 m, the oscillator frequency instability should not be worse than 5×10^{-8}. For multi-channel interference-stable radio-telegraphy and photo-telegraphy, the instability of the final and intermediate oscillators should not be worse than

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SOV/106-59-4-4/13

Required Frequency Stability of Reference Oscillator in Shortwave Radio Systems

$(1 - 2) \times 10^{-8}$. Existing oscillators fail to meet these requirements, the instability of the best being of the order of 2×10^{-6}. All this points to the necessity of developing oscillators with instabilities not worse than $(1 - 2) \times 10^{-8}$ and, as the references show, this is an engineering possibility.

The necessity for these high stabilities is often doubted on the grounds that irregularities in the propagation conditions cause phase variations at the receiver and thus even if the transmitter transmitted a sinusoidal oscillation without any modulation, i.e. a pure spectral line, then a zone of frequency indeterminacy would exist at the receiver and, providing that the stability of the transmitter frequency is of the same order or one order better than the indeterminacy then further improvement is useless.

On this point, further experimental evidence is desirable but in the absence of direct measurements the mean statistical value of the frequency spread $2\Delta\omega_{cc}$ at the receiver

Card2/6

can be found indirectly if the following assumptions are made:
1) The distribution of the probability density of the instantaneous value of the voltage at the receiver input conforms to the normal law (Refs 8,9 and 10);
2) The self-correlation coefficient of the amplitude envelope approximates to a "bell-shaped" curve (Refs 11,12).
In this case, if the self-correlation coefficient is written in the form:

$$R(\tau) = \exp\left(-\frac{\beta^2\tau^2}{4}\right) \qquad (1)$$

then the value of the coefficient β can be found from the formula:

$$\beta = 2.91\ N(E_0) \qquad (2)$$

where $N(E_0)$ is the mean number of fadings of the field below a level E_o; E_o being the most probable level. The spectrum can then be written in the form:

$$F(\omega) = A^2 \exp\left[- \frac{(\omega - \omega_o)^2}{\beta^2} \right] \qquad (3)$$

where A is the amplitude of the shortwave oscillation; ω_o the oscillation frequency of the transmitter. The frequency band at the receiver is:

$$2\Delta f_{cc1} = 2(f - f_o) = 0.47\ \beta \qquad (4)$$

if only the spectrum components having magnitudes greater than A/10 are considered and:

$$2\Delta f_{cc2} = 1.37\ \beta$$

if components differing from A by more than 1% are considered.

SOV/106-59-4-4/13

Required Frequency Stability of Reference Oscillator in Shortwave Radio Systems

The results of applying these formulae to measurements obtained by N.N. Shumskiy (Ref 14) are given in Table 1. These show that for f_0 lying between 10 Mc/s and 30 Mc/s, $\Delta f/f_0$ lies between $(2.5 - 0.8) \times 10^{-8}$, respectively. The author then summarises published results of frequency deviation measured over various periods of time and various propagation conditions and concludes that:

1) the indeterminacy zone does not exceed several units $\times 10^{-8}$;

2) there are no grounds for limiting the frequency instabilities of oscillators to 10^{-6} or 10^{-7} and stabilities of $(1 - 2) \times 10^{-8}$ are, in fact, desirable.

Card5/6

SOV/106-59-4-4/13

Required Frequency Stability of Reference Oscillator in Shortwave Radio Systems

There are 1 table and 16 references, 6 of which are English and 10 Soviet.

SUBMITTED: July 28, 1958

Card 6/6

ACC NR: AP7005429 SOURCE CODE: UR/0106/66/000/010/0001/0009

AUTHOR: Rozov, V. M.

ORG: none

TITLE: Required accuracy of phasing of signals during diversity combined reception with prephasing

SOURCE: Elektrosvyaz', no. 10, 1966, 1-9

TOPIC TAGS: signal to noise ratio, short wave

ABSTRACT: An analysis of a receiver channel circuit for diversity combined reception of short wave signals which have been prephased for AC adding. It is shown that the area $\Delta\phi = 20\text{-}30^\circ$ is a sort of natural limit of the required phasing accuracy. Within this limit, the quality of diversity reception is relatively little decreased with increasing $\Delta\phi$. The increase in probability of error where $\Delta\phi = 25^\circ$ in comparison with the probability of error with accurate phasing ($\Delta\phi = 0$) will not exceed a factor of 1.5-2. The loss in signal/noise ratio with diversity reception with a phasing inaccuracy of 25° will not exceed 1.2 db in practical cases. Orig. art. has: 6 figures, 6 formulas and 2 tables. [JPRS: 39,568]

SUB CODE: 20 / SUBM DATE: 01Oct65 / ORIG REF: 004 / OTH REF: 002

Card 1/1 UDC: 621.396.621.59

ROZOV, V.M.

Multichannel telegraphy using single-band radio channels.
Elektrosviaz' 18 no.1:1-10 Ja '65. (MIRA 18:4)

L 40553-65 EWT(d)/FSS-2/EEC-4/EEC(t) Pn-4/Pp-4/Pac-4
ACCESSION NR: AP5003851 S/0106/65/000/001/0001/0010

25
B

AUTHOR: Rozov, V. M.

TITLE: Problem of multichannel telegraphy using single-band radio channels

SOURCE: Elektrosvyaz', no. 1, 1965, 1-10

TOPIC TAGS: radio telegraphy, multichannel radio telegraphy, binary information transmission

ABSTRACT: The probability of malfunction in a partial channel is determined; it depends on the relative noise levels in transmitting and receiving routes and on the fading law. It is assumed that selective fading in the band of the telephone channel being multiplexed simultaneously affects only 1—2 partial channels. A theoretical analysis of the above problem yields these results: (1) Nonlinearities in the group-signal route of a short-wave radio link affect the fidelity of binary-information transmission differently: when the transmitter nonlinearity decreases

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L 40553-65

ACCESSION NR: AP5003851

0

(signal-to-noise ratio $\gamma_1 > 10$), the fidelity of the signal does not change provided the average signal power in the binary channel remains constant; when, however, the receiver nonlinearity decreases down to a certain limit (set by the level of external and fluctuation noise), the fidelity sharply increases; (2) Guaranteeing fidelities of 10^{-3} and 10^{-4} requires $\gamma_2 \geqslant 40$ and $\gamma_2 \geqslant 100$ at the receiving end, respectively; these requirements allow for fadings which obey both Rayleigh and log-normal laws; (3) Introduction of amplitude clipping of the group signal may sometimes enhance the fidelity by 1—3 orders; (4) Amplitude clipping makes the frequency-multiplexed system equivalent to the time-limit system insofar as transmitter-tube power utilization is concerned, but the former has a better noise immunity. Orig. art. has: 2 figures and 18 formulas.

ASSOCIATION: none

SUBMITTED: 16Jun64 ENCL: 00 SUB CODE: EC

NO REF SOV: 006 OTHER: 008

Card 2/2

GUREVICH, Moisey Sergeyevich; LEVIN, G.A., retsenzent; LIVSHITS, Kh.A., retsenzent; ROZOV, V.M., otv. red.; VEYTSMAN, G.I., red.; ROMANOVA, S.F., tekhn.red.

[Radio-signal spectra] Spektry radiosignalov. Moskva, Sviaz'-izdat, 1963. 310 p. (MIRA 16:6)
(Radio waves--Spectra)
(Information theory)

ROZOV, Valeriy Mikhaylovich; FEDOROVICH, Ye.G., otv. red.; GOROKHOVSKIY, A.V., red.; SLUTSKIN, A.A., tekhn. red.

[Multiplexing apparatus for single-band radio channels] Apparatura uplotneniia odnopolosnykh radiokanalov. Moskva, Sviaz'izdat, 1962. 92 p. (MIRA 16:6)

(Radio)

YEKZHANOV, Ye.P.; ROZOV, V.M.

Effect of parasitic frequency modulation of the exciter on the operation of a single-band channel. Elektrosviaz' 15 no.10:26-30 O '61. (MIRA 14:10)

(Radio)

28792
S/106/61/000/010/004/006
A055/A127

6.7110 (1121, 1524)
9.3272 (1040)

AUTHORS: Ekzhanov, Ye. P., Rozov, V. M.

TITLE: Effect of the parasitic frequency-modulation of the driver on the operation of single-band channels

PERIODICAL: Elektrosvyaz', no. 10, 1961, 26 - 30

TEXT: The use of reference frequency generators as modulator drivers in single-band transmitters (or of heterodynes in single-band receivers) causes distortion of the transmitted signals if parasitic frequency modulation exists in the output of the reference frequency generator (or of the heterodyne). The author describes an experimental method for estimating the effect of this parasitic FM upon the transmission of voice signals and of multichannel telegraph signals through a single-band channel, this method being based on the use of a circuit simulating the single-band channel. Fig. 1 is a block-diagram of this simulator. The single-band signal is produced by means of the balanced modulator BM and the electro-mechanical filter (with a passband of about 3,000 cps). To the balanced modulator are applied the analysed signal and an hf-voltage from the crystal oscillator Osc$_1$. The filter is followed by a preamplifier and a detector. For the

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Effect of the parasitic frequency-modulation.....

reinsertion of the carrier is used the crystal oscillator Osc_2, the mean frequency of its output voltage being equal to the frequency of the voltage at the output of Osc_1. The reactance tube is to modulate the frequency of Osc_2, i.e. to produce the parasitic FM in the single-band channel. The maximum frequency deviation obtained in the circuit is ± 50 cps. The a-f signals from the detector are amplified by a three-stage a-f amplifier whose frequency characteristic is practically linear in the 50 ÷ 4,000 cps band. The use of negative feedback makes it possible to obtain an overall coefficient of nonlinear distortion not exceeding 2.5% at an input signal voltage of 1.2 ÷ 1.5 v and an output signal voltage $\leqslant$ 10 v eff across a 600-ohm load. This distortion was measured on simulators of a voice-frequency carrier telegraphy system "TT-12/16 (50 - 75 baud) and of a mock-up of the equipment for multiplexing single-band radio-channels by telegraph channels (200 - 300 baud). For the analysis of telephone signal distortions, a magnetic sound recorder was connected to the input of the simulator, and a loudspeaker to its output. The effect of the parasitic FM on voice telephone signals transmitted through the simulator was estimated in percentages of perceptibility of the distortion in comparison with a nondistorted transmission of male and female speech. Nine listeners took part in the experiments. The results of the experiments (grouped in three tables) led to

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Effect of the parasitic frequency-modulation...

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A055/A127

the following conclusions: 1) The distortions of telegraph signals in the presence of parasitic FM in single-band channels are variable bias of telegraph sendings. 2) The bias magnitude depends both on the modulating frequency F_M of the parasitic FM and on the existing frequency deviation: a) at any value of F_M between 20 and 150 cps, the distortions grow when the frequency deviation F_{dev} decreases; they are already quite considerable at very small deviations; b) if F_{dev} remains constant, distortions tend to decrease when F_M increases. 3) Considering as inexpedient the loss of the margin in radio-telegraph channels owing to internal interferences superior to $2 \div 5\%$, it is possible to admit $F_{dev} \leqslant 5$cps as the maximum magnitude of the frequency deviation of the parasitic FM. Though it is possible to estimate the order of magnitude of the effect of the parasitic FM on the qualitative indices of radio-channels, the above results do not give a sufficiently comprehensive idea of the quantitative relationships existing in practical radio-channels. There are 2 figures, 3 tables and 1 Soviet-bloc reference.

SUBMITTED: January 28, 1961

Card 3/4

ROZOV, V.M.

Addition of telegraph signals on a common resistor. Radiotekhnika 15 no. 5:73-78 My '60. (MIRA 14:4)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi.
(Telegraph)

DERKACHEV, D.I.; ROZOV, V.N.

"Economizing electric power in the electrolysis of zinc and copper"
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